

## **Portfolio Software**

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For more information regarding how to access software from Los Alamos, contact the <u>Software</u> Team.

# **End User License Agreements (EULA)**

These software tools are available through **EULAs**.

- <u>KIVA</u>The KIVA family of Computational Fluid Dynamics (CFD) software predicts complex fuel and air flows as well as ignition, combustion, and pollutant-formation processes in engines.
- NJOY2010 NJOY2012The NJOY Nuclear Data Processing System is a comprehensive computer code package for producing pointwise and multigroup cross sections and related quantities from evaluated nuclear data in the ENDF format, including the latest US library.
- PARMELAPARMELA is a multi-particle beam dynamics code used primarily for electronlinac beam simulations. The name comes from the phrase, "Phase and Radial Motion in Electron Linear Accelerators.
- PARMTEQPARMTEQ and several other RFQ design codes comprise this group of codes and are used to design high-performance radio-frequency quadrupole (RFQ) linacs. PARMTEQ is an acronym for "Phase and Radial Motion in a Transverse Electric Quadrupole."

### **Executable Downloads**

FCI deploys "lite" versions of software users can download with a single click. These downloads are more basic versions designed to provide users with a trial of the software. Selected executable software is available as proprietary source code that can be licensed for a fee.

- <u>DIsco</u>DIsco provides dynamic control and monitoring functionality for multiple Teledyne Isco D-Series syringe pumps and includes features for advanced pump routine development.
- <u>FEHM (Finite Element Heat and Mass Transfer Code)</u>FEHM is used to simulate groundwater and contaminant flow and transport in deep and shallow, fractured and unfractured porous media throughout the US DOE complex.
- <u>Improvements to MARFA Code (released as MARFA version 3.2.3)</u>The software will be used to assess long-term migration of radioactive material and other contaminants beneath the surface of the Earth.
- PARMILA Parmila version 2 is an ion linac particle dynamics code.

- POISSON/SUPERFISHPoisson Superfish is a collection of programs for calculating static magnetic and electric fields and radio-frequency electromagnetic fields in either 2-D Cartesian coordinates or axially symmetric cylindrical coordinates.
- RAVEGRID RaveGrid (Raster to Vector Graphics for Image Data) version 2.5\* is an image vectorization and image segmentation application that takes your raster images and turns them into smaller, editable vector images in the SVG format.
- <u>RELIC</u>The RELIC software package allows the user to calculate intermediate-coupling
  wavefunctions, energy levels, transition strengths (Judd-Ofelt theory), and radiative decay
  properties of tri-positive lanthanide ions in solids.
- <u>Seismoacoustic Software</u>Addressing local and regional-scale seismological and infrasound problems through a combination of theory, data analysis and field deployments in support of United States treaty/explosion monitoring.
- <u>SEQSTRAP</u>SEQSTRAP iteratively extrapolates partial length nucleic acid sequences based on comparisons with similar, overlapping sequences.
- <u>SEQUEDEX</u>Sequedex classifies DNA sequences by analyzing collections of sequences in new ways.
- Total-Variation Regularized Numerical Differentiation, Version 1.0
- Trace Trace is an interactive beam-dynamics program that calculates the envelopes of a bunched beam, including linear space-charge forces, through a user- defined transport system. Trace 3-D provides an immediate graphics display of the envelopes and the phase-space ellipses and allows nine types of beam-matching options.
- <u>Trident Compiler</u>Trident is a compiler for floating point algorithms written in C, producing circuits in reconfigurable logic that exploit the parallelism available in the input description.

# **Mobile Apps**

Los Alamos offers free mobile apps on Google Play and the App Store.

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